



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink-L27

**Issued:** 8 May 2021 / 0800L (1200Z)

**Valid:** 9 May 2021 / 0142 – 0334L (0542 – 0734Z)



**Forecast Discussion:** High pressure continues to move across the southeastern US. Slightly cooler and drier air has begun to overspread the area. There will likely be scattered cumulus clouds later this afternoon and evening. Another storm system is developing over the south central US which will begin to increase winds slightly over the area as it develops this weekend. Winds over the Space Coast as well as the recovery area look to be on the light side. The overall threat for a delay looks to be small but the main weather concern for the primary day will be from the Cumulus Cloud Rule.

In the event of a delay, the storm system over the central US moves into the Mississippi Valley late Sunday into early Monday morning. As this happens, the surface pressure gradient tightens and this will cause winds to increase. This will occur both at the Space Coast as well as the recovery area. As with late Saturday/early Sunday, expect scattered cumulus clouds. The primary weather concerns for Monday morning are the Cumulus Cloud Rule as well as Liftoff Winds.

Launch Day		Probability of Violating Weather Constraints					
<b>Launch Day</b>		<b>20%</b>		Primary Concerns: Cumulus Cloud Rule			
		Weather Conditions				Additional Risk Criteria	
		<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b> LOW
			Type	Coverage	Base (ft)	Tops (ft)	
<b>Temp/Humidity:</b> 67°F / 78%	Cumulus	Scattered	2,500	4,000	<b>Booster Recovery Weather:</b> LOW		
<b>Liftoff Winds (200'):</b> 110° 10 - 15 mph					<b>Solar Activity:</b> LOW		
24-Hour Delay		Probability of Violating Weather Constraints					
<b>24-Hour Delay</b>		<b>30%</b>		Primary Concerns: Cumulus Cloud Rule, Liftoff Winds			
		Weather Conditions				Additional Risk Criteria	
		<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b> LOW
			Type	Coverage	Base (ft)	Tops (ft)	
<b>Temp/Humidity:</b> 72°F / 86%	Cumulus	Scattered	2,500	4,000	<b>Booster Recovery Weather:</b> MOD		
<b>Liftoff Winds (200'):</b> 170° 15 - 20 mph					<b>Solar Activity:</b> LOW		
<b>Note:</b> The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.							
<b>Next Forecast Will Be Issued</b>		AS REQUESTED					